

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 April 2005 (21.04.2005)

PCT

(10) International Publication Number
WO 2005/035944 A1

(51) International Patent Classification⁷: **E21B 47/10**

(21) International Application Number:
PCT/IB2004/002877

(22) International Filing Date:
2 September 2004 (02.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/510,596 10 October 2003 (10.10.2003) US

(71) Applicant (for BR only): **SCHLUMBERGER SURENCO SA** [PA/PA]; 8 Calle Aquilino de la Guardia, Panama City (PA).

(71) Applicant (for SD, TR only): **SCHLUMBERGER OIL-FIELD ASSISTANCE LIMITED**; Craigmuir Chambers, Road Town, Tortola (VG).

(71) Applicant (for CN only): **SCHLUMBERGER OVERSEAS S.A.** [PA/PA]; 8 Calle Aquilino de la Guardia, Panama City (PA).

(71) Applicant (for CZ, DZ, EC, IN, LT, MA, VN only): **PRAD RESEARCH AND DEVELOPMENT N.V.** [NL/NL]; De Ruyterkade 62, Willemstad, Curacao (AN).

(71) Applicant (for GB, JP, NL only): **SCHLUMBERGER HOLDINGS LIMITED**; P.O. Box 71, Craigmuir Chambers, Road Town, Tortola (VI).

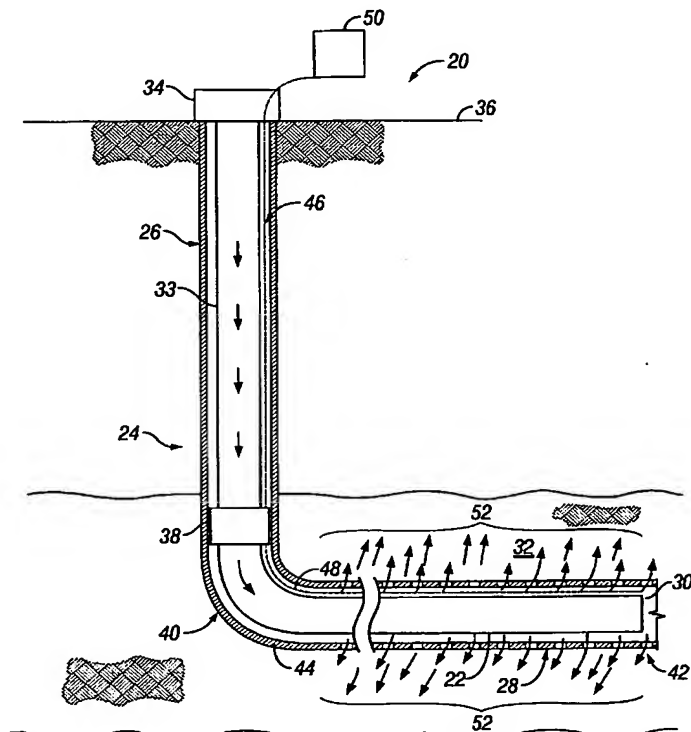
(71) Applicant (for TT only): **SCHLUMBERGER SERVICES LIMITED**; P.O. Box 438, Tortola (VI).

(71) Applicant (for all designated States except BR, CA, FR, GB, NL, US): **SCHLUMBERGER TECHNOLOGY B.V.** [NL/NL]; Parkstraat 83-89, NL-2514 JG The Hague (NL).

(71) Applicant (for FR only): **SERVICES PETROLIERS SCHLUMBERGER** [FR/FR]; 42, rue Saint Dominique, F-75007 Paris (FR).

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR DETERMINING A FLOW PROFILE IN A DEVIATED INJECTION WELL



(57) Abstract: A system and method is provided for determining flow profiles in a deviated well. The system and method utilize temperature measurements and a modeling technique that enable the use of temperature profiles in deriving flow profiles for fluid injected into deviated wells.



(71) **Applicant (for CA only):** SCHLUMBERGER CANADA LIMITED [CA/CA]; 525-3rd Avenue S.W, Calgary, Alberta T2P 0G4 (CA).

(72) **Inventors; and**

(75) **Inventors/Applicants (for US only):** JALALI, Younes [US/GB]; 3 Penarth Place, Cambridge CB3 9LU (GB). BUI, Thang, Dinh [VN/US]; Pete Dept., TAMU-3116, Collage Station, TX 77843-3116 (US). GAO, Guohua [CN/US]; 457 S. Harvard Ave., Tulsa, OK 74112 (US).

(74) **Agent:** KANAK, Wayne, I.; Gamma House, Enterprise Road, Chilworth Science Park, Southampton SO16 7NS (GB).

(81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,

MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.